

INDIANA Epidemiology NEWSLETTER



Indiana State
Department of Health

Epidemiology Resource Center
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Influenza Vaccine Shortage Prompts New Recommendations for 2004-2005 Season

State health officials are appealing to health care providers to limit use of this year's diminished supply of flu vaccine to immunizing people at high risk from complications of influenza.

The Centers for Disease Control and Prevention (CDC) has issued these guidelines for targeting these groups at highest risk from complications of influenza:

- Adults 65 years of age or older
- People 24 months to 64 years of age with chronic medical conditions
- Children 6 to 23 months of age
- Women who are pregnant during influenza season
- Residents of long-term care and nursing home facilities
- Persons 6 months to 18 years of age on long-term aspirin therapy
- Health care workers with direct patient contact
- Household contacts and out-of-home caregivers of children 0-6 months of age

California-based Chiron Corporation announced October 5 that it will not be able to supply influenza vaccine this year, thus cutting the nation's supply of available flu vaccine by about 50 percent for the 2004-2005 influenza season.

"There is a critical shortage of influenza vaccine this year, and there have been significant changes in the recommendations for vaccine administration," said State Health Commissioner Greg Wilson, M.D., who sent an appeal today to all Indiana physicians to follow the CDC guidelines. "Only by limiting administration of the vaccine to high-risk groups will we be able to protect most of our vulnerable populations."

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Wilson said that the public can call the Indiana Family Helpline at (800) 433-0746 for information about the flu vaccination guidelines. **Those interested in receiving flu vaccination should first contact their primary care physician, then their local health department, or go to the ISDH Web site featured page on influenza located at www.statehealth.in.gov/healthinfo/influenza.htm, then click flu clinics. Additional information about influenza is also available on the Web site.**

The ISDH had originally ordered 85,000 doses of influenza vaccine for use this season by local health departments (LHDs) and health care providers participating in the Vaccines for Children Program (VFC). This program provides immunizations to **children less than 19 years of age** who are uninsured or who are insured through Medicaid. LHDs also receive vaccine through Federal Act 317 funding for children not covered by the VFC. The CDC is evaluating options on “transforming” VFC vaccine for use by other populations.

In an October 6 letter to LHDs and other VFC providers, the ISDH discussed how these providers should allocate flu vaccine:

"As of October 5, 2004, the Immunization Program has received 18,330 doses of influenza vaccine (Fluzone), which will be distributed to local health departments and VFC health care providers. The amount of vaccine distributed to providers will be rationed based on the amount of influenza vaccine ordered by each site during the 2003-2004 influenza season. Health care providers will receive approximately 30 percent of last year's doses ordered, or a minimum of 10 doses.

"This vaccine must be prioritized for use in persons in groups listed above, particularly those at increased risk of complications from influenza because of chronic medical conditions, as listed below:

- children who have chronic heart or lung conditions, including asthma
- children who have required regular medical follow-up or hospitalization during the preceding year because of these conditions:
 - diabetes mellitus and other chronic metabolic conditions
 - chronic kidney disease
 - hemoglobinopathies such as sickle-cell disease
 - weakened immune system (caused by medications or by HIV)
 - children and adolescents (ages 6 months-18 years) who are receiving long-term aspirin therapy

"The VFC Program is not able to provide the live attenuated nasal spray vaccine, which is licensed for use in persons 5-49 years of age who do not have medical high-risk conditions. However, if available within your practice, the live attenuated influenza vaccine (FluMist) should be used to immunize:

- health care workers working in direct patient care (although not in contact with severely immunocompromised persons)
- healthy individuals 5-49 years of age in close contact with infants 0-6 months of age (household contacts or out-of-home caregivers)."

Other flu vaccine, including vaccine offered to adults, is ordered and dispensed by private providers.

It will be **especially important** this year for people to use other infection control measures to help control flu outbreaks. To prevent the spread of ALL respiratory infections, including influenza, good respiratory hygiene is important. Serious respiratory illnesses like influenza are spread by coughing or sneezing and unclean hands.

- To help stop the spread of germs, cover your mouth and nose with a tissue when you cough or sneeze. If you don't have a tissue, cough or sneeze into your upper sleeve, not your hands. Put your used tissue in the wastebasket.
 - To clean your hands after coughing or sneezing, wash with soap and water, or clean with alcohol-based hand cleaner.
 - People who experience symptoms of influenza should stay home from work, school, and daycare.
-

Pertussis on the Increase – Over 20 Cases in St. Joseph County

Wayne Staggs, MS
ISDH Epidemiology Resource Center

As of September 30, 100 cases of pertussis (whooping cough) have been reported in Indiana, which is more than double the number of cases reported (49) for the same period last year. Many other cases are currently under investigation. Nationally a similar increase in cases is being reported, with 9,983 cases reported through September 25, 2004, compared with 5,978 in 2003 (a 67% increase) for the same time period.

Thirty-one counties in Indiana had reported cases by the end of September. Twenty-three cases have occurred in St. Joseph County, with 20 of the cases having cough onset since June 25. As is the situation statewide, several more cases are currently under investigation in St. Joseph County. Cases in St. Joseph County range in age from less than one month to 46 years. Eleven of the cases are 10 years or older, and seven are under the age of one. Of the seven cases under the age of one year, four have been hospitalized. Twelve of the cases are male and 11 are female. Seventeen (74%) of the cases are white, and 6 (26%) are black or African American.

A pertussis alert, along with [Recommended Pertussis Control Measures](#), was sent to physicians and infection control nurses in St. Joseph County on August 20. Schools and daycare centers with cases have sent letters home to parents advising of potential exposure and symptoms. The St. Joseph County outbreak is ongoing and a complete write-up of the outbreak will follow when cases diminish.

Pertussis vaccine is currently licensed only for children under 7 years of age, and vaccine-produced immunity begins to wane approximately five years after the last dose is given. Six of the cases were too young to have received at least three doses of vaccine. Waning immunity is often cited for the increase in cases among adolescents and adults. Increased suspicion among clinicians, improved diagnosis, and improved reporting are also factors in the increase in this age group.

Pertussis is characterized by one or more of the following symptoms:

- Prolonged cough (lasting 10-14 days and more)
- Long spells of coughing with spasms
- Coughing with a whooping sound
- Coughing that leads to gagging or vomiting

Health care providers who suspect a patient may have pertussis should report it to the local health department immediately. Providers can find information on the disease, laboratory testing, treatment of cases, and prophylaxis of contacts on the [Recommended Pertussis Control Measures](#) mentioned above. Information that can be provided to cases or parents of cases can be found at the ISDH [Quick Facts](#) Web site.

Outbreak Summary 2003: The Old and the New

Pam Pontones, MA
ISDH Field Epidemiology Director

The main objective of any communicable disease outbreak investigation is to identify the infectious agent and the causative factors in order to control the outbreak and prevent further disease transmission. Thorough investigations can also monitor emerging trends and provide a knowledge base to prevent similar occurrences in the future. Therefore, outbreaks or clusters of unusual disease incidence are reportable to the Indiana State Department of Health (ISDH) [IAC 410 1-2.3]. Outbreak investigations should be a collaborative effort between the local health departments (LHDs) and the ISDH. It is the LHD's responsibility to notify the ISDH of the outbreak and to perform the majority of investigative procedures, while the role of the ISDH is mainly coordination and consultation. In large or complex outbreak situations, the ISDH may provide direct or on-site assistance.

This narrative describes only those outbreak investigations in which the ISDH Epidemiology Resource Center (ERC) participated. The ERC investigated a total of 18 outbreaks in 2003 (Table 1), approximately half of the number of outbreaks investigated in 2002. This was due largely to the increased number of viral gastroenteritis outbreaks investigated in 2002. This figure does not include outbreaks investigated independently by LHDs.

Of the 18 reported outbreaks, three were non-gastrointestinal, and 15 were gastrointestinal. Of the gastrointestinal outbreaks, six were foodborne, eight were spread by person to person contact, and one had no conclusive transmission route. No waterborne outbreaks were reported in 2003. The Food Protection Program and Long Term Care Program, in addition to lending valuable expertise and experience during outbreak investigations, also investigate a substantial number of food-related complaints and other clusters of illness in which the ERC never becomes involved.

Non-Gastrointestinal

An outbreak of **monkeypox** virus infection occurred in June 2003 from contact with an overseas shipment of infected animals imported into a Texas distributor and sold through an Illinois retailer. This was the first reported introduction of monkeypox into the Western Hemisphere, and several states were affected. Seven confirmed, five probable, and five suspect cases were identified in seven Indiana counties. All had contact with infected animals. Several cases were hospitalized. One case developed encephalitis, but no deaths were reported. A field team from the Centers for Disease Control and Prevention assisted the ISDH with the initial investigation and testing, and a separate field team conducted follow-up testing in August. The Indiana Board of Animal Health conducted animal tracing and issued an embargo on the sale, transportation, and display of imported "pocket pets" until the outbreak was declared over.

Twelve confirmed cases of infectious **mononucleosis** were identified in a Tippecanoe County school starting in June. All cases reported close contact with a previously ill case through school activities, athletics, or family gatherings.

In August, an outbreak of **Methicillin-Resistant *Staphylococcus aureus* (MRSA)** was reported in a university in Vigo County. Seven cases were laboratory confirmed, all of whom participated on the same football team. All cases reported infected skin lesions, and all cases tested culture positive. Genetic fingerprint analysis revealed that six cases were infected with the same strain. Cases reported direct contact with one another, including the sharing of towels.

Gastrointestinal

Viral

As in 2002, more outbreaks investigated in 2003 were attributed to **noroviruses** than any other agent. Three confirmed and five suspected outbreaks of norovirus infection occurred in Indiana. Settings included long-term care facilities, restaurants/caterers, and hospitals.

Noroviruses are the most common causes of acute gastroenteritis in the U.S. and are easily transmitted by contaminated food and beverages. Foodborne viral outbreaks usually occur when an infected person handles raw foods (salads, vegetables, etc.) or ready-to-eat foods (sliced luncheon meats, rolls, etc.) without thoroughly washing hands after using the restroom. Due to the extremely infectious nature of viral agents, noroviruses can also easily be transmitted from person to person via contaminated hands or surfaces, and evidence suggests that these viruses may also be transmitted through inhalation of vomitus. One of the outbreaks was foodborne, and seven were attributed to person to person contact. In most outbreaks, there was a background of illness among food handlers or contact with others ill prior to the outbreak. The inoculum dose is extremely low (approximately 50 viral particles). Symptoms include watery diarrhea, nausea and vomiting, generally within 24-48 hours after exposure. Those infected can continue to shed virus in stool up to two weeks after symptoms cease. The viruses are environmentally hardy, surviving freezing, temperatures to 60°C, and chlorine levels to 10 ppm.

Bacterial Intoxications

In February 2003, an outbreak occurred among patrons who ate at a local restaurant in Clark County. Eight cases were identified, but specimens for laboratory testing were not available. According to the clinical information provided, illness was most likely intoxication caused by ***Bacillus cereus***. *B. cereus* is commonly found in soil. The bacterial cells form spores that allow the organism to survive periods of environmental stress, such as temperature extremes and dryness. Illness occurs when food contaminated by soil is held under conditions favorable for multiplication of the organism, and illness is usually associated with inadequately heated, cooled, or reheated “dense” foods such as meats, stews, and gravies. Once ingested, the organism replicates in the gastrointestinal tract and produces an enterotoxin that causes the characteristic symptoms. The illness is not transmissible person to person. Fried rice and grain-based foods are common vehicles. In this outbreak, rice was the only common food vehicle. No stool specimens or food samples were available to confirm an agent.

In 2003, ***Clostridium perfringens*** was confirmed in one outbreak and suspected in another. *C. perfringens* is a bacterium found in soil and the gastrointestinal tract of healthy people and animals, including cattle, pigs, poultry, and fish. The bacterial cells form spores that allow the organism to survive periods of environmental stress, such as temperature extremes and dryness. Illness occurs when food contaminated by soil or feces is held under conditions favorable for multiplication of the organism, and illness is usually associated with inadequately heated, cooled, or reheated “dense” foods such as meats, stews, and gravies. Once ingested, the organism replicates in the gastrointestinal tract and produces an enterotoxin that causes the characteristic symptoms. The illness is not transmissible person to person.

A confirmed outbreak of *C. perfringens* associated with a dinner at a civic organization in St. Joseph County occurred in March. Fourteen cases were identified, and two tested positive for *C. perfringens*. The clinical syndrome reported was also compatible with this organism. Noodles in sauce from the dinner tested positive for *C. perfringens*. Statistical analysis to identify a food vehicle indicated that sausage was likely associated with illness. Although the sausage tested negative for *C. perfringens*, toxins and pathogens are often unequally distributed in food. In addition, statistical analysis was difficult to perform due to the small sample size. Bacteria were most likely introduced to other food items through cross-contamination, and bacterial proliferation most likely occurred through inadequate cooling and cold-holding temperatures.

In October, a suspected outbreak of *C. perfringens* occurred following a catered dinner in Henry County. Thirty-four cases were identified, and the clinical syndrome was most compatible with *C. perfringens*. No stool specimens were available for laboratory confirmation. No food samples were available for laboratory analysis; however, statistical analysis revealed that chicken casserole was most likely associated with illness. Patrons reported that food was not hot and did not appear to have temperature control. An unlicensed caterer prepared meal items at a private residence, so food preparation practices were not regulated. The local health department issued a cease-and-desist order to the caterer to stop preparing food for commercial purposes.

Bacterial Infections

In August, an outbreak of *Shigella sonnei* was confirmed in a Tippecanoe County daycare. Foodborne outbreaks of shigellosis usually occur when an infected person handles raw or ready-to-eat foods without thoroughly washing hands after using the restroom. Due to the extremely infectious nature of the bacteria, shigellosis can also easily be transmitted from person to person via contaminated hands or surfaces. The inoculum dose is extremely low (10-100 bacteria), and without proper antibiotic treatment, bacterial shedding can continue up to one month after symptoms cease. This outbreak was most likely introduced into the facility by an ill child or staff member and transmitted person to person. Several children were reported ill with diarrheal symptoms but not excluded or treated. One child and one employee tested positive, and eight other children with compatible symptoms were identified. Control measures included parent education, exclusion, adequate hand-washing practices, proper disinfection, and mandatory stool testing to identify asymptomatic carriers.

Two confirmed foodborne outbreaks of **salmonellosis** occurred in 2003. *Salmonella* bacteria are commonly found in poultry, eggs, cattle, pigs, and reptiles. Foodborne illness due to *Salmonella* usually results from inadequate cooking, temperature abuse, and cross-contamination of foods. Foodborne illness can also occur when an infected person handles raw or ready-to-eat foods without thoroughly washing hands after using the restroom. Over 3,000 serotypes of *Salmonella* have been identified, and knowledge of serotypes can help identify food vehicles. *Salmonella* can also be transmitted person to person.

One outbreak occurred following a private dinner in Marion County in January. Thirteen people were reported ill, and five tested positive for *Salmonella typhimurium*, variant *Copenhagen*. No food samples were available for laboratory analysis, and due to the small sample size, statistical analysis to determine a food vehicle could not be performed. However, the one food item common to all cases was stuffing. Since the food items were prepared in private homes, information regarding food preparation methods was unavailable. Four secondary cases, all of whom reported having prior contact with someone who ate the dinner, were also identified.

Another outbreak was associated with a Hendricks County restaurant in August. Four patrons and one employee tested positive for *Salmonella enteritidis*. Genetic fingerprint analysis conducted on three of the specimens indicated an identical strain, although this strain is common. All cases had consumed food from the restaurant prior to illness, although no common food items were identified. The one employee who tested positive worked as a server at the restaurant. Two other food handlers with compatible symptoms were also identified but not tested. This suggested a background of illness among restaurant employees, and multiple opportunities existed for bare-hand contact of various food items.

Outbreak Investigation

Based on experiences in disease investigation, the ISDH makes the following recommendations to local health departments for efficient and scientifically sound disease investigations:

- ▶ *Maintain supplies for outbreak investigations.* Local health departments should have adequate supplies necessary for outbreak investigations. **Containers for collecting stool specimens specific for bacterial and viral pathogens (7A) should be readily available. Be sure to check the expiration dates on the containers.** New containers can be ordered or expired ones replaced by calling the ISDH Container Section at (317) 233-8104. Call (317) 233-7740 for information regarding specimen collection for respiratory outbreaks.
- ▶ *If an outbreak is suspected, contact the ISDH field epidemiologist in your District as soon as possible.* Gather basic information about the outbreak beforehand. For foodborne outbreaks, this information includes:
 - Type of event, location, date, number of meal(s) served and time of meal(s)
 - Source of food served (caterer, home, etc.) and contact person for the source
 - Number of exposed persons
 - Number of known ill persons
 - Range and times of illness onset
 - Main symptoms
 - Contact person for ill persons and phone number, if possible
 - Menu of all food and beverage items served
 - Availability of clinical and food samples

For respiratory outbreaks, obtain the following information:

- Location of outbreak
 - Number of known ill persons
 - Range and times of illness onset
 - Main symptoms
 - Contact person for ill persons and phone number, if possible
 - Any laboratory results already obtained by private physicians
 - Availability of clinical samples (i.e., are people still becoming ill)
- ▶ *Ensure that everyone involved in the process is working together.* This may involve initial and even daily meetings among environmental and nursing staffs. Both public health nurses and environmental health specialists have a critical role to play in outbreak investigations.

SUMMARY OF DISEASE OUTBREAKS INVESTIGATED BY THE ISDH EPIDEMIOLOGY RESOURCE CENTER

INDIANA, 2003

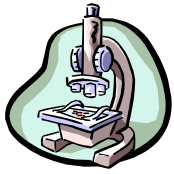
Month	County	Site	Description	Organism ¹	Most probable source	Local Participation	Comments ²
January	Marion	Long-term care facility	Gastroenteritis 60 cases	Unknown	Community	Marion CHD	Probably viral
January	Tippecanoe	Long-term care facility	Gastroenteritis 57 cases	Norovirus	Community	Marion CHD	1 case confirmed
January	Marion	Assisted living facility	Gastroenteritis 61 cases	Norovirus	Infected staff member or community	Marion CHD	2 cases confirmed
January	Decatur	Long-term care facility	Gastroenteritis 35 cases	Unknown	Community	Decatur CHD	Probably viral
January	Steuben	Assisted living facility	Gastroenteritis 39 cases	Norovirus	Community	Steuben CHD	1 case confirmed
January	Marion	Private residence	Gastroenteritis 13 cases	<i>Salmonella typhimurium</i> var. <i>Copenhagen</i>	Stuffing	Marion CHD	5 cases confirmed
February	Clark	Restaurant	Gastroenteritis 8 cases	Unknown	Rice	Clark CHD	Probably <i>B. cereus</i>
February	Marshall	Restaurant	Gastroenteritis 9 cases	Unknown	Unknown	Marshall CHD	Probably viral
March	St. Joseph	Civic organization	Gastroenteritis 14 cases	<i>Clostridium perfringens</i>	Noodles in sauce	St. Joseph CHD	2 cases confirmed
June	Adams Hancock Johnson Marion Randolph LaPorte Vigo	Various	Rash illness 17 cases	Monkeypox virus	Infected animals	Adams CHD Hancock CHD Johnson CHD Marion CHD Randolph CHD LaPorte CHD Vigo CHD Jay CHD	7 confirmed 5 probable 5 suspect

Month	County	Site	Description	Organism ¹	Most probable source	Local Participation	Comments ²
June	St. Joseph	Restaurant	Gastroenteritis 5 cases	Unknown	Unknown	St. Joseph CHD	Transmission route unknown
June	Tippecanoe	School	Mononucleosis 12 cases	Epstein-Barr virus	Infected case	Tippecanoe CHD	12 cases confirmed
August	Tippecanoe	Daycare center	Gastroenteritis 10 cases	<i>Shigella sonnei</i>	Infected child or staff member	Tippecanoe CHD	2 cases confirmed
August	Allen	Athletic stadium	Gastroenteritis 14 cases	Unknown	Infected family member	Allen CHD	Probably viral
August	Hendricks	Restaurant	Gastroenteritis 7 cases	<i>Salmonella enteritidis</i>	Infected staff member	Hendricks CHD	5 cases confirmed
August	Vigo	University	Skin infections 6 cases	Methicillin-resistant <i>Staphylococcus aureus</i>	Infected case	Vigo CHD	6 cases confirmed
September	Lake	Hospital	Gastroenteritis 12 cases	Unknown	Infected patient	Lake CHD	Probably viral
October	Henry	Caterer	Gastroenteritis 34 cases	Unknown	Chicken casserole	Henry CHD	Probably <i>Clostridium perfringens</i>

1. Organisms culture-confirmed from stool samples, foods, other environmental sources, or determined by serologic testing.

2. Assessment of likely etiology based on incubation period, distribution of cases, and spectrum of symptoms shown.

CHD = County Health Department



Under The Microscope

Spotlight on Laboratory Issues

The ISDH Mycobacteriology Laboratory

By Mark Glazier
ISDH Laboratories

Among infectious diseases, tuberculosis (TB) remains the second leading killer of adults in the world, with more than 2 million TB-related deaths each year. An estimated 2 billion persons are infected with *Mycobacterium tuberculosis*, the bacterium that causes tuberculosis. This year, there will be more than 8 million new cases of TB reported worldwide.

While the tuberculosis data for the United States paints a much brighter picture than that of many other countries, recent trends are cause for concern. Despite a decline in tuberculosis cases nationwide, rates have increased in certain states, including Indiana, and elevated TB rates continue to be reported in certain populations (e.g., foreign-born persons and racial/ethnic minorities). One important aspect of reversing these trends is rapid identification of the bacteria by laboratories.

The Indiana State Department of Health (ISDH) Mycobacteriology Laboratory is dedicated to protecting the citizens of Indiana through accurate and timely testing of TB isolates. The laboratory is staffed by three microbiologists and one laboratory technician with almost 50 years of combined experience in mycobacteriology. The TB lab utilizes state-of-the-art technology, as well as traditional culture methods to identify mycobacteria in submitted specimens and reference cultures.

In 2003, the TB laboratory received and processed over 2,700 specimens, with over 12% testing positive for TB. Nearly 170 specimens (6%) tested positive for mycobacteria species other than tuberculosis (MOTT). The lab also received 365 reference cultures in 2003. Over 20% of the cultures were positive for TB, while MOTT was identified for more than 75%.

Specimens received in the TB laboratory are logged in and processed each morning. Processing involves a decontamination step to rid the specimen of normal flora bacteria and a concentration step to increase the likelihood of growth in media. Both liquid and solid media are inoculated from the processed specimen. A smear is also prepared to check the specimen for the presence of acid-fast bacilli (AFB). The slides are read daily utilizing fluorescent microscopy, with positive results faxed to the submitter the same day.



Laboratory technician, Laura Taube, setting up to process TB specimens; photo courtesy of Mark Glazier

Primary identifications of suspected growth from liquid and solid media are done by High Performance Liquid Chromatography (HPLC). Isolates are processed with a multi-step procedure involving the extraction of the mycolic acids from the cell wall of the bacteria and the derivatization of the acids. Samples are then run through the HPLC instrument, producing distinct chromatographic patterns. Each species of mycobacteria has a unique pattern, which aids the experienced microbiologist in making a definitive identification.

The TB lab also utilizes species-specific DNA probes as needed for identification purposes (<1% of identifications).

Another vital service provided by the TB laboratory is antibiotic susceptibility testing of all new TB cases. The lab performs susceptibility tests for the five primary TB drugs: isoniazid (INH), rifampin, ethambutol, streptomycin, and pyrazinamide (PZA). The laboratory also repeats drug sensitivities for patients who remain culture positive after three months of therapy. Accurate susceptibility testing is an important part of the TB control program that helps to minimize the number of multi-drug resistant TB cases.

Earlier this year, the TB laboratory began participating in the Centers for Disease Control and Prevention (CDC) TB Genotyping Program. The lab submits an isolate from every culture-positive patient with TB to a genotyping laboratory in Michigan under contract with CDC. TB genotyping identifies genetic links between *Mycobacterium tuberculosis* isolates from different TB patients. TB genotyping results, when combined with epidemiologic data, will help outbreaks to be detected earlier and controlled more rapidly, as well as identify incorrect TB diagnoses based on false-positive culture results more easily.

The ISDH Mycobacteriology Laboratory continues to investigate the latest technologies for TB testing to ensure the timeliest and most accurate results possible. As an integral part of Indiana's TB Control Program, the TB lab is striving for the ultimate goal of the elimination of tuberculosis in the United States.

References:

1. CDC. *Trends in Tuberculosis-United States, 1998-2003*. MMWR 2004; 53.
 2. National TB Controllers Association. *Guide to the Application of Genotyping to Tuberculosis Prevention and Control*. U.S Department of Health and Human Services, CDC; June 2004.
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FIELD EPIDEMIOLOGIST POSITION AVAILABLE

The ISDH is seeking a field epidemiologist (Epidemiologist E7) to serve in the Tippecanoe County area (District 4). This employee would be based in Tippecanoe County but will also assist local health departments in Benton, Carroll, Cass, Clinton, Fountain, Montgomery, Warren, and White Counties. Job duties include, but are not limited to:

- Assisting local public health professionals in analyzing data gathered during epidemiologic outbreak investigations within the District;
- Cooperating with and securing assistance from public health and medical professionals and others in epidemiologic outbreak investigations within the District;
- Assisting local health departments within the District to prepare and respond to public health events;
- Coordinating efforts with local public health professionals to identify, analyze, and interpret local clusters of disease through routine surveillance methods; and
- Interpreting data developed by other programs and agencies, such as the ISDH, regarding the possibility of any increase in the risk of disease within the District.

Minimum qualifications include four years of full-time professional experience in epidemiology or public health and a bachelor's of science degree in a biological science, chemistry, an environmental or health science, mathematics, nursing, pharmacology, public health, a social science, statistics, toxicology, or a closely related area from an accredited college required. Substitutions: accredited graduate training in any of the following areas may substitute for the required experience on a year-for-year basis: a biological science, mathematics, a social science, or a closely related area. A master's degree in epidemiology, public health, an environmental or health science, nursing, toxicology, or statistics from an accredited college may sub for all of the required experience.

Those interested should contact Betty Edwards-Clark, ISDH Human Resources, at 317-233-7602.

ISDH Hires New Epidemiologists

The following epidemiologists have recently joined the ISDH Epidemiology Resource Center (ERC).

Linda Foley joined the ERC on September 13 as the Director of Environmental Epidemiology, Indoor Air, and Radiological Health. These three areas were recently combined to provide a coordinated environmental health program for the ISDH. In addition, this section will also be responsible for developing and executing a chemical terrorism public health response. One of Linda's main responsibilities will be to use state health and environmental databases to evaluate the relationship between environmental pollution and human health. Linda recently served as a field epidemiologist in western Kentucky and conducted statistical data analysis for a large hospital in Ohio. Linda may be reached at 317-233-7390 or lfoley@isdh.state.in.us.

Sandra Gorsuch, formerly the District 4 Field Epidemiologist, became the District 5 Field Epidemiologist on September 27. Sandy will be based at the ISDH and will assist local health departments with disease outbreak investigation and case surveillance in Boone, Hamilton, Hancock, Hendricks, Johnson, Marion, Morgan, and Shelby Counties. Sandy will continue to assist the local health departments in District 4 until a replacement is hired (see position announcement above). Sandra may be reached at sgorsuch@isdh.state.in.us.

Elizabeth Hibler, formerly the District 4 Public Health Coordinator and Program Director for Grants in the ISDH Public Health Preparedness and Emergency Response Division, will join the ERC as the Quality Assurance Epidemiologist on October 25. Her responsibilities will include assessment of historical, current, and any future epidemiologic data; data projects; and data request issues. Liz may be reached at ehibler@isdh.state.in.us.



Training Room

Indiana State Department of Health Immunization Program Presents: “Child and Adolescent Immunizations from A to Z”

The ISDH Immunization Program and Health Educators are offering this free, one-day educational course on all aspects of immunization practices. Topics include:

- Principles of Vaccination
 - Overview of the immune system
 - Classification of vaccines
- An overview of Vaccine-Preventable Diseases
- General Recommendations on Immunization
 - Timing and spacing
 - Contraindications and precautions to vaccination
- Safe and Effective Vaccine Administration
 - Prior to administration
 - Administration
 - Documentation and reminder/recall
 - Adverse Events
- Safe Vaccine Storage and Handling
- Indiana Requirements
 - Schools
 - Daycare/Head Start
 - Exemptions
- Tools to Read Immunization Records
- Vaccine Misconceptions
 - MMR and autism
 - Thimerosal and mercury
 - Overloading the immune system
 - Influenza vaccine
- Reliable Resources

This course is designed for all immunization providers and staff. Presentation of this course takes six hours or can be customized to provide the components needed for your office or clinic staff. A training manual and certificate of attendance are provided to all attendees.

Courses are held throughout Indiana about four times per month (see schedule next page). All persons involved in immunizations are encouraged to attend a course in their area. Registration is required. To attend or schedule/host a course in your area, or for more information on “Child and Adolescent Immunizations from A to Z” and other immunization education opportunities, please contact Beverly Sheets by calling (317) 501-5722, or e-mail hepbbev@aol.com.

CALENDAR 2004 "IMMUNIZATIONS FROM A TO Z"

Oct. 21, 2004 "Immunization A-Z", South Bend Memorial Hospital, 9AM-3 PM

Oct. 27, 2004 "Immunization A-Z", Porter County Health Dept., Valparaiso, 9AM-3PM

Nov. 10, 2004 "Immunization A-Z" Hamilton County 4 H Fairgrounds, 9AM-3 PM

Nov. 16, 2004 "Immunization A-Z", St. Francis College, Fort Wayne (FULL)

Dec. 1, 2004 "Immunization A-Z", IUMG, Indianapolis (FULL)

Dec. 3, 2004 "Immunization A-Z" ISDH Rice Auditorium, 9AM- 3PM

Dec. 9, 2004 "Immunization A-Z" Elkhart General Hospital, 9AM-3 PM

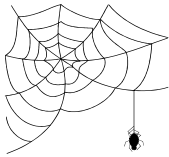
NOTE: There is no charge for any of these events.

NOTE: You must register for these events. Training materials are provided.

Contact Beverly Sheets at 317-501-5722 or hepbbev@aol.com for further information and to schedule "Immunizations From A-Z" and other immunization events in your area.

NOTE: There is NO CHARGE for any of these events.

YOU MUST REGISTER for these events. Training materials are provided.



Wonderful Wide Web Sites

ISDH Data Reports Available

The ISDH Epidemiology Resource Center has the following data reports and the Indiana Epidemiology Newsletter available on the ISDH Web Page:

http://www.in.gov/isdh/dataandstats/data_and_statistics.htm

Indiana Cancer Incidence Report
(1990, 95, 96, 97, 98, 99)

Indiana Mortality Report
(1999, 2000, 2001, 2002)

Indiana Cancer Mortality Report
(1990-94, 1992-96, 1999)

Indiana Natality Report
(1998, 99, 2000, 2001, 2002)

Indiana Health Behavior Risk Factors
(1999, 2000, 2001, 2002)

Indiana Induced Termination of Pregnancy Report
(1998, 99, 2000, 2001)

Indiana Health Behavior Risk Factors (BRFSS)
Newsletter (9/2003, 10/2003, 6/2004)

Indiana Marriage Report
(1995, 97, 98, 99, 2000)

Indiana Hospital Consumer Guide
(1996)

Indiana Infectious Disease Report
(1997, 98, 99, 2000, 2001)

Public, Hospital Discharge Data
(1999, 2000, 2001, 2002)

Indiana Maternal & Child Health Outcomes &
Performance Measures
(1990-99, 1991-2000, 1992-2001)

HIV Disease Summary

Information as of September 30, 2004 (based on 2000 population of 6,080,485)

HIV - without AIDS to date:

327	New HIV cases from October 2003 thru September 2004	12-month incidence	5.38 cases/100,000
3,603	Total HIV-positive, alive and without AIDS on September 30, 2004	Point prevalence	59.26 cases/100,000

AIDS cases to date:

373	New AIDS cases from October 2003 thru September 2004	12-month incidence	6.13 cases/100,000
3,617	Total AIDS cases, alive on September 30, 2004	Point prevalence	59.49 cases/100,000
7,385	Total AIDS cases, cumulative (alive and dead)		

NOTE: Please read the following regarding the above statistics.

HIV and AIDS CASE RESIDENCY AND DE-DUPLICATION EFFORTS

Background: HIV and AIDS Case Reporting

All states and U.S. territories have some form of HIV/AIDS reporting that incorporates reporting by individual medical care providers and/or laboratories conducting HIV-related tests. This national effort enables public health surveillance staff to track the scope of the HIV and AIDS epidemic. It also allows the federal government to allocate funds equitably to the states for the care of people with HIV and AIDS who cannot pay for all or part of their treatment.

All states and areas have been reporting AIDS cases since 1986. Because of advances in treatment that have extended the time between HIV infection and a diagnosis of AIDS, states began instituting HIV reporting in 1985 as a way of understanding how the epidemic has changed and the progress of HIV disease. However, HIV case reporting is currently less standardized than AIDS case reporting. Some areas or states have only recently implemented HIV reporting, and this reporting is not consistent across all areas. Therefore, AIDS case reports (also called surveillance data) are considered the only nationally representative data source for the epidemic.

The Problem: Potential for Duplication

Because AIDS surveillance data are a snapshot of the number of persons living with AIDS in a particular state at a particular point in time, they may reflect when a person entered the state health care system with a diagnosis of AIDS but not where the person currently resides and is receiving care. For example, a person may be diagnosed with AIDS in Illinois, but move to Indiana where he or she may continue with treatment. If the person does not inform his or her Indiana provider of a previous diagnosis in Illinois, the Indiana provider will report the case to the local health department as a new diagnosis. The outcome of this reporting would be that both Indiana and Illinois would have the same person counted as a new AIDS case. This situation results in duplicate case reporting to the CDC.

In the example cited, the case should only be counted by Illinois; its duplication artificially adds an AIDS case for Indiana and subsequently inflates the cumulative U.S. data.

The potential for duplication has become more of an issue because of the mobility of our society and also because of the success of treatment for HIV and AIDS. Persons with HIV or AIDS may move for reasons related to their infection, for example, to be near family or friends, to seek social support services, to seek more knowledgeable physicians, to seek experimental drug programs, or because of inability to work due to HIV disease. With the advent and success of highly active antiretroviral therapy (HAART), those persons living relatively healthy lives may move for reasons unrelated to HIV or AIDS—to seek out new job opportunities or simply to fulfill a dream of living in a different place. This mobility increases the challenge of avoiding duplication in counting persons with AIDS across different jurisdictions throughout the U.S.

Duplication could be a problem because surveillance data are used to track the epidemic and for allocation of Ryan White CARE Act (RWCA) Title I and II and other treatment and care funds. The RWCA is a major source of federal funding for HIV/AIDS care for un- and under-insured people living with HIV and their families. Currently, the federal government allocates money based on the number of persons estimated to be living with AIDS in a particular state. These numbers are obtained from a formula that uses AIDS cases reported to CDC. For equitable distribution of these funds, it is imperative that people with AIDS are counted only once, based on their state of residency at diagnosis.

The potential for duplication has increased since HIV case reporting has been implemented. This has occurred because there are more records for the same person over time. For example, in many states, health care workers must report laboratory tests indicating possible HIV infection (HIV antibody tests, CD4 cell counts, and viral loads) to health departments. Each state's routine surveillance practices are intended to identify these repeat reports and make sure cases are counted only once. But, if states cannot find correct information on what state the person lived in at the time of his or her diagnosis of AIDS or HIV (not AIDS), a person can be counted more than once.

The Solution: De-duplication

To counter the potential problem of duplication, CDC initiated the Interstate Duplication Evaluation Project (IDEP) in 2002. This considerable effort compared patient records in the national database across states in order to identify potential duplicate cases. The following process was used.

1. CDC reviewed the national case reports sent to CDC through December 2001 for duplications. Because CDC does not receive names of patients, a match of information consisting of soundex (which is a code for the last name), date of birth, and gender identified potential duplications.
2. CDC provided states with a listing of all cases that were potential duplicates from other states. CDC also included additional supporting information such as diagnosis and death dates to assist states in their attempts to determine whether persons were the same or different individuals.
3. States contacted each other to compare their patient profiles along with additional information available at the state level that is not reported to CDC.
4. Based on their discussions, the states decided whether the cases represented the same person. If they did, the states determined the state of residency at the date of diagnosis.
5. The states forwarded these decisions to CDC, which returned them, after processing and quality control, to the states for updating their surveillance databases. CDC anticipates that all updates will be complete by December 2004.

Results of IDEP

The results to date of IDEP show that the number of duplications at the national level is no higher than expected. This indicates that surveillance practices to minimize duplications have been effective. However, duplications were identified through this process and de-duplication needs to occur.

After de-duplication, the numbers of cumulative diagnosed HIV and AIDS cases in individual states will most likely decrease, as will the overall national numbers. CDC estimates that the decreases on the national level will be less than 5% of the AIDS cases reported over the entire history of the HIV epidemic.

CDC and states will continue to address potential duplications through routine surveillance procedures like those followed in IDEP.

The 1982-2001 IDEP is being done in 2 phases. Phase 1 is the largest. Indiana will publish the results of Phase 1 IDEP in the mid-October Quarterly Report. Changes in both HIV and AIDS cases will be available on the county map. Phase 2 will be completed by the end of the year. Updates to the IDEP project are to continue quarterly.

If you have further questions, you may contact the HIV/AIDS Epidemiologist at 317-233-7506.

REPORTED CASES

 of Selected Notifiable Diseases

Disease	Cases Reported in September MMWR Week 35-39		Cumulative Cases Reported January - September MMWR Weeks 1-39	
	2003	2004	2003	2004
Campylobacteriosis	71	57	382	294
Chlamydia	1,881	1,758	12,849	13,644
<i>E. coli</i> O157:H7	15	6	68	34
Hepatitis A	8	14	52	47
Hepatitis B	5	4	28	34
Invasive Drug Resistant <i>S. pneumoniae</i> (DRSP)	7	4	118	111
Invasive pneumococcal (less than 5 years of age)	3	1	37	33
Gonorrhea	782	709	4,938	4,925
Legionellosis	7	2	24	28
Lyme Disease	3	3	18	14
Meningococcal, invasive	4	1	38	17
Pertussis	12	42	28	100
Rocky Mountain Spotted Fever	1	0	2	4
Salmonellosis	71	37	435	354
Shigellosis	22	33	124	166
Syphilis (Primary and Secondary)	1	3	34	43
Tuberculosis	7	6	97	91
Animal Rabies	10 (bats)	3 (bats)	21 (bats)	10 (9 bats and 1 skunk)

For information on reporting of communicable diseases in Indiana, call the *ISDH Epidemiology Resource Center* at (317) 233-7665.

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